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**Operations**

**AFSCN PROGRAM REQUIREMENTS  
PROCESS**

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This instruction, 50<sup>th</sup> Space Wing Instruction (50 SWI) 10-617, implements Air Force Policy Directive (AFPD) 10-6, Mission Needs and Operational Requirements, and AFPD 16-3, Priorities for Resources Management. This instruction defines the Air Force Satellite Control Network (AFSCN) requirements process, identifies roles and responsibilities, and establishes the nominal time-lines and associated documentation necessary for requesting and obtaining AFSCN support. For purposes of this instruction, the user agency is defined as any agency requesting support from the AFSCN.

General: The AFSCN is a 'common user network' made up of the Network Management, Communications and Range Segments which are used for the support of Launch Vehicles and the Department of Defense, National, Civil and Allied space systems. Requests for use of AFSCN assets are submitted by the user agency in the form of program requirements. The requirements are analyzed by the 50 SW, in partnership with SMC/RN and HQ AFSPC, for operational and engineering supportability. Formal documentation of user agency support requirements and of the AFSCN understanding and agreement to meet those requirements provides an underpinning for the process.

**SUMMARY OF REVISIONS**

This instruction has been completely rewritten to clarify the satellite program requirements analysis and documentation process.

## Chapter 1

### ROLES AND RESPONSIBILITIES

**1.1. 50 SW/XP.** As designated by the 50 SW/CC, 50 SW/XP (XP) is the Program Requirements Manager for the AFSCN. As such, XP is the 50 SW final approval authority for the program response documentation regarding AFSCN resources. XP is responsible for the following:

1.1.1. Initial Contact. The AFSCN PSM serves as the entry point and initial Office of Primary Responsibility (OPR) for user agencies requesting support from the AFSCN.

1.1.2. Coordination. As appropriate, the AFSCN PSM will coordinate the program requirements and associated support plans with Headquarters Air Force Space Command (HQ AFSPC) Command Range, Space-lift, and Airfield Operations Division (XOR); Command, Control, Communications and Navigation Division (DRN); Mission Systems Division (LCO); Space and Missile Systems Center (SMC) Air Force Satellite Control Network Program Office (RNAI); Vehicle Operations Deployables (Det 12/VOD); and other 50 SW entities.

1.1.3. Analysis. The AFSCN PSM will coordinate the engineering and operational analyses regarding all phases of the required mission support.

1.1.4. Technical Interchange Meetings (TIMs). The AFSCN PSM will organize and/or support program TIMs and invite appropriate agencies to support these meetings, as required.

1.1.5. Network Loading. The AFSCN PSM will request a network loading analysis be performed by 850 SCS/SCYA utilizing information provided by the user agency and documented in a Network Loading Worksheet.

1.1.6. Security Analysis. The AFSCN PSM will request a network security analysis be performed by 50 SCS utilizing information provided by the user agency and documented in the security analysis findings report. User agency programs do not have the authority to connect to the AFSCN when cross-domain security issues are incurred without proper waiver authority and DAA approval to operate.

1.1.7. Inter Range Operations Number (IRON) Database. The AFSCN PSM will request an IRON from 22 SOPS/MAF, Mission Support Flight via official letter on behalf of the user agency, and coordinate with the AFSCN Sustainment Program Office (SMC/RNS) to provide the user agency with an IRON database change request (DBCR).

1.1.8. Internal AFSCN Documentation. As required, the AFSCN PSM will assist the user agency with preparation and submission of 50th SW Change Request Forms (CRFs) for AFSCN baseline changes and Project Workflow Requirements Resource (PWRR) for communications connectivity. 50 SWI 33-113 describes the project implementation process and includes the appropriate configuration management considerations.

1.1.9. A four letter Call Sign will be requested of the new “external” user which represents the user’s mission, or location, or history at the user agency’s choosing. External users will use 50 SWI 10-218, Air Force Satellite Control (AFSCN) Voice Procedures, Attachment 5 as a baseline to avert conflicts with other AFSCN call signs. 22 SOPS, in coordination with wing XP, will review submitted call signs and grant approval or disapproval of use. 22 SOPS/MAF will issue new 50 SW units numeric Satellite Operations Center (SOC) designators as required.

1.1.10. SOC Certification. This certification process is required for all new SOC's connecting to AFSCN assets. SOC certification is a two step process: C2 hardware certification and DCC/ESD Certificate To Operate (CTO) [ref para 1.2.3.], followed by AFSCN RTS exercises.

1.1.11. AFSCN Training. As required, the AFSCN PSM will provide the user agency with AFSCN-centric training materials, documentation, operational instructions and appropriate points of contact.

**1.2. 22 SOPS.** 22 SOPS tasks all AFSCN RTSs to support programs via the Network Tasking Order (NTO). 22 SOPS is responsible for the following:

1.2.1. IRON Assignment and scheduling access. Upon receipt of the SOC call sign, 22 SOPS will assign a support IRON and update the Electronic Schedule Dissemination (ESD) subsystem. IRON requests from the AFSCN PSM shall occur not later than one year prior to launch. This will ensure issued IRONs will meet SMC/RNS RTS IRON database change timelines.

1.2.2. Orbital Analysis. The user agency will identify all orbital products that are required to 22 SOPS/DOUA. 22 SOPS/DOUA will provide any/all products required by the AFSCN. 22 SOPS will help coordinate a process to receive conjunction assessment reports with Cheyenne Mountain Operations Center (CMOC) and the user agency.

1.2.3. Certificate to Operate (CTO). As required, 22 SOPS through completion of the Certificate to Operate (CTO) will certify the user agency ability to operate the Distributed Communication Controller (DCC) and ESD systems.

1.2.4. Electronic Schedule Dissemination (ESD) Training. In the interim, 22 SOPS will provide ESD training in 4 separate categories: system administration, mission planning, orbital analysis and real-time operations. The training will be provided at a location agreed upon by the user agency and AFSCN AO. All associated travel costs for this training will be funded by the user agency.

1.2.5. RTS Documentation Distribution. 22 SOPS will distribute requirements documentation to the AFSCN RTSs (e.g. OD, ORL).

1.2.6. Mission Support Readiness Review. 22 SOPS will support the readiness review approximately 30-90 days prior to user agency mission support date. [ref 2.4.]

**1.3. HQ AFSPC/DRN.** DRN validates operations requirements and ensures the correlation between operations requirements documents and technical requirements documents meet user needs. DRN also provides the organize-train-equip link between operator push/pull and acquirer pull/push to meet operator's needs (reference AFSPCPAM 38-9). DRN provides AFSCN system level guidance to SMC/RN. DRN is responsible for ensuring that unmet validated requirements derived through the 50 SW program requirements process are incorporated into appropriate system level requirements and acquisition documents. DRN, working with SMC/RNA, HQ AFSPC/XOR and HQ AFSPC/LCO is also responsible for ensuring that future AFSCN upgrades and sustainment projects are responsive to requirements identified through the 50 SW program requirements process.

**1.4. HQ AFSPC/LCO.** LCO is responsible for supporting DRN and XOR in evaluating and planning for AFSCN communications and logistical requirements derived through the 50 SW program requirements process, ensuring that upgrades are responsive to the user agency requirements for communications resources.

**1.5. HQ AFSPC/XOR.** XOR is responsible for operational advocacy of AFSCN requirements derived through the 50 SW program requirements process, ensuring that required AFSCN modification funding needs are properly identified through the Program Objective Memorandum (POM) process, and providing operational policy and guidance as required.

**1.6. SMC/RNAI.** RNAI is responsible for the engineering analysis of user agency requirements for use of the AFSCN, identifying system resource capabilities to support user requirements and providing engineering responses to 50 SW/XP for inclusion into the SC (optional) and PSP. RNAI coordinates with DRN, XOR, and 50 SW/XP to ensure that requirements derived through the 50 SW program requirements process are integrated into AFSCN upgrade and sustainment projects.

**1.7. USER AGENCY.** The User Agency is the agency requesting AFSCN support. The user agency is responsible for the following:

1.7.1. Set Program Security Level/Mission Overview. The user agency will provide the AFSCN PSM the satellite program security level and the initial description of program requirements.

1.7.2. Mission Requirements. The user agency will present detailed data regarding the satellite program mission and support requirements.

1.7.3. Program Meetings. The user agency will invite the AFSCN to program TIMs and design reviews, as appropriate.

1.7.4. Requirements Documentation. The user agency will create the program requirements documentation defined in [Chapter 3](#) (e.g. PI/PRD).

1.7.5. Documentation pre-Coordination. The user agency will provide the draft program requirements documentation to the AFSCN (i.e. 50 SW/XP) prior to formal signature.

1.7.6. Pre-launch Readiness Review. As necessary, the user agency will support the pre-launch readiness review approximately 30-90 days prior to program launch. [ref [2.4.](#)]

1.7.7. Requirement Changes. As necessary, the user agency will provide formal page changes or revision submittals to program requirements documentation, to identify changes in program requirements levied onto the AFSCN.

## Chapter 2

### REQUIREMENTS DEFINITION PROCESS

**2.1. Request for AFSCN Support.** Requests for AFSCN support are submitted to the 50 SW/XP Program Requirements Branch. Initial contact is with the AFSCN Program Support Manager (PSM). After the appropriate security level has been set and the initial description of program requirements are identified, the AFSCN PSM will provide an informal preliminary assessment regarding AFSCN ability to support. This assessment includes:

2.1.1. Space-Ground Compatibility. Program Tracking, Telemetry and Commanding (TT&C) requirements will be assessed for compatibility with the AFSCN support capabilities during the mission timeframe.

2.1.2. AFSCN Loading Analysis. An initial AFSCN loading analysis will be performed to assess the ability to support the mission contact objectives with the projected AFSCN capacity during the requested mission timeframe. Results of this loading analysis will be provided to the user agency.

2.1.3. AFSCN Security Analysis. 50th SCS/SCBI (50th SW Information Assurance Office) will conduct a security analysis to determine AFSCN ability to support the user agency IAW CJCSI, DoD and AF regulations with respect to cross security domain issues. User agency shall provide architectural drawings and subject matter experts to answer issues. As the user agency develops and changes their architecture, new assessments will be required with a new ability to support decision rendered.

2.1.4. Non-AFSCN Solution. If deemed appropriate, a non-AFSCN (i.e. alternate agency) support recommendation will be provided for some or all of the identified program requirements.

**2.2. Initial Technical Interchange Meeting.** If the preliminary assessment indicates a fundamental ability of the AFSCN to support the user agency requirements, a Technical Interchange Meeting (TIM) will be scheduled. The TIM objectives are as follows:

2.2.1. Identification of Action Officers. The initial TIM will be conducted between the user agency and 50 SW/XP, SMC/RNA and HQ AFSPC/LCO/DRN/XOR. It will provide for the identification and introduction of AFSCN and requesting agency action officers (AOs).

2.2.2. AFSCN Requirements Process. An overview of the AFSCN requirements process will be presented (based on 50 SWI 10-617).

2.2.3. AFSCN Capabilities. Current and planned AFSCN capabilities will be presented, with emphasis on the user agency timeframe for the requested support.

2.2.4. Initial Program Requirements. The high level mission and support requirements will be presented by the requesting agency. If sufficient information is available, the AFSCN PSM may request the program fill out a Network Loading Work Sheet.

2.2.5. SOC Certification. The need for the Command & Control (C2) or Satellite Operations Center (SOC) certification will be determined IAW 33-202. C2/SOC certification is necessary to ensure that the proposed C2 platform is compatible with the AFSCN infrastructure. Guidelines for obtaining Designated Approval Authority (DAA) sign-off will be addressed.

**2.3. Iterative Requirements Process Initiated.** An iterative requirements coordination process begins between the AFSCN support organizations and the requesting user agency. Examples of recurring process actions include, but are not limited to, the following:

- 2.3.1. Documentation Level. Establish agreement between AFSCN and user agency regarding the level of program documentation to be submitted (e.g. determine if a Program Introduction/Statement of Capabilities [PI/SC] is needed).
- 2.3.2. Document Review. The user agency requirements and AFSCN response documentation will be reviewed and coordinated by each agency in draft form prior to formal signature approval and submittal.
- 2.3.3. Document Response. After formal transmittal of the user agency program requirements documentation, an engineering and operational assessment will be made and will be included in the response documentation. The documentation process is described in [Chapter 3](#).
- 2.3.4. Program Meeting Participation. AFSCN AO attendance at user agency TIMs and program reviews (e.g. System Design Reviews, Preliminary Design Reviews and Critical Design Reviews) is highly recommended.
- 2.3.5. Identification of Unmet Requirements. The AFSCN will coordinate with program AOs to determine the most cost effective and risk reducing method to satisfy unmet requirements. Technical solutions will be assessed, and if necessary, the need for AFSCN baseline changes and funding sources will be identified.

**2.4. Readiness Review.** At approximately 30-90 days prior to the requested AFSCN support date, the user agency and AFSCN will conduct a readiness review. Review objectives include the assurance of AFSCN support capability, user agency readiness to launch, and coordination of critical activities with the 22nd Space Operations Squadron (22 SOPS) scheduling branch and AFSCN priority user representatives. During this review, the following objectives are accomplished:

- 2.4.1. Mission Overview. The user agency shall provide a mission overview briefing to the 22 SOPS and AFSCN priority user representatives identifying mission objectives and critical support activities. This will assist schedulers and priority users in resolving potential network scheduling conflicts.
- 2.4.2. Operational Briefing. As appropriate, the 22 SOPS will conduct an operational briefing to include introductions to operational organizations and tours of supporting areas within the Schriever AFB complex.

## Chapter 3

### REQUIREMENTS DOCUMENTATION

**3.1. Document Description.** The AFSCN requirements documentation process is a standardized system that provides a common structure for defining program requirements and agreed-to support architectures. It formally identifies the user agency's requirements and provides the AFSCN response defining how or if the requirements will be met.

**3.2. Document Organization.** Three documentation levels are described below. Example templates will be provided by 50 SW/XP upon request.

3.2.1. Program Introduction (PI). If deemed appropriate by the AFSCN PSM, the PI is created by the user agency and used as a planning document for AFSCN loading analysis, security analysis and development actions. It provides a top-level program requirements definition. The AFSCN PSM will determine if a PI is needed. A PI is typically required only when changes to the AFSCN baseline are anticipated, cross-domain security issues are present, or long lead-time procurements are necessary. The PI is signed by the user agency and submitted as early as five years, but not later than three years, prior to the mission need date. This is intended to ensure adequate time for necessary funding and development initiatives.

3.2.2. Statement of Capability (SC). The SC is created by the AFSCN AO and is the formal response to the PI. It describes how support will be provided and what changes to the baseline may be required. The SC provides operational and engineering responses and is generally finalized within 90 days of receipt of the formal PI. The document is signed by the appropriate AFSCN representative and is an official agreement by the AFSCN to support the mission.

3.2.3. Program Requirements Document (PRD). The PRD is created by the user agency and contains the specific details of all mission requirements. Identifying specific 'support implementation' as a requirement is not appropriate (i.e. the user should specify only program requirements and avoid point solutions). The PRD provides, but is not limited to, information regarding factory pre-compatibility testing, launch-based compatibility testing, command formatting, telemetry rates, link margin analysis, communications routing and services, and required launch, early orbit, and on-orbit support requirements. The PRD is signed by the user agency and nominally submitted 36 months prior to the mission support need date.

3.2.4. Program Support Plan (PSP). The PSP is prepared by the AFSCN AO and specifies how the program requirements will/will not be satisfied. It contains an item-for-item engineering and operational response to the PRD requirements. When the document is signed, the PSP becomes the official agreement regarding AFSCN support to the mission. The PSP is generally finalized within 90 days of receipt of the formal PRD.

3.2.5. Operations Requirements (OR). The OR, to include the Expedited OR (EOR) and OR Extract (ORE), is typically created by the Launch Range (LR) and describes the specific details of mission requirements. It is a stand-alone document used by the LR to provide detailed support requirements for the AFSCN. These actions include, but are not limited to, the rehearsals, exercises and data flows necessary to prepare for launch. The OR is nominally submitted 90 days prior to the mission need date.

3.2.6. Operations Directive (OD). The OD is created by the User support agency (e.g. Space Operations Center/Mission Control Complex [SOC/MCC]) and describes in detail how the AFSCN Remote Tracking Station (RTS) required support will be provided. It identifies the AFSCN role in the mission, the technical configuration[s] and the duties of all AFSCN personnel. The OD is also the source document for site specific Vehicle Folders. If Mission Unique Equipment (MUE) is required by the support agency, the OD will identify the needed training, configuration, and operations and maintenance responsibilities (e.g. signal flow and patching associated with the RTS RDT&E patch panel interface). The OD is generally finalized not later than 30 days prior to RTS support (to include rehearsals and exercises), but can be earlier if training and unique signal flows are required for MUE.

3.2.7. Operational Requirements Letter/Message (ORL/ORM). The ORL/ORM is created by the Command and Control (C2) support agency (e.g. Space Operations Center/Mission Control Complex [SOC/MCC]) and is used to identify short duration mission specific support configurations (e.g. in support of launch, early orbit, transfer orbit, etc.). The ORL/ORM are typically subordinate to ODs, but can be a stand-alone document in the case of a single event support requirement (i.e. launch support). If no OD is developed, the ORL/ORM will provide all of the necessary information and documentation identified in paragraph 2.2.6.

**3.3. Document Revisions.** Changes to the requirements documentation may be formally submitted by the user agency (i.e. transmitted with program office signature) in the form of page changes or a complete document revision. The AFSCN will reply (in kind) to new or modified requirements in the corresponding response documents (e.g. PSP). ‘Document revisions will not exceed the nominal timelines described in paragraph 2.2. The AFSCN response documentation may be reviewed at any time, but nominally tri-annually, and will be modified as necessary to reflect changes in system architecture and/or Concept of Operations (CONOPS). All proposed support changes will be coordinated with the user agency to minimize or eliminate mission impacts or cost.

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**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****Abbreviations and Acronyms***

**22 SOPS**—22nd Space Operations Squadron  
**50 SW/XP**—50 Space Wing Plans and Programs Office  
**AFPD**—Air Force Policy Directive  
**AFSCN**—Air Force Satellite Control Network  
**AFSPC**—Air Force Space Command  
**C2**—Command and Control  
**CC**—Commander  
**CDR**—Critical Design Review  
**CMOC**—Cheyenne Mountain Operation Center  
**CONOPS**—Concept of Operations  
**CRF**—Change Request Form  
**DBCR**—Database Change Request  
**DCC**—Distributed Communication Controller  
**ESD**—Electronic Scheduling Dissemination  
**HQ**—Headquarters  
**IRON**—Inter Range Operations Number  
**NOPS**—NRO Operations Squadron  
**NRO**—National Reconnaissance Office  
**NTO**—Network Tasking Order  
**OD**—Operations Directive  
**OPR**—Office of Primary Responsibility  
**OR**—Operations Requirements  
**PDO**—Publishing Distribution Office  
**PDR**—Preliminary Design Review  
**PI**—Program Introduction  
**POM**—Program Objective Memorandum  
**PRD**—Program Requirements Document  
**PSM**—Program Support Manager  
**PSP**—Program Support Plan

**PWRR**—Project Workflow Requirements Resource

**RTS**—Remote Tracking Station

**SAGES**—Satellite and Ground Environment Simulation

**SC**—Statement of Capabilities

**SCSORD**—Satellite Control System Operational Requirements Document

**SMC**—Space and Missile Systems Center

**SOC**—Satellite Operations Center

**SWI**—Space Wing Instruction

**TIM**—Technical Interchange Meeting

**TT&C**—Telemetry, Tracking and Commanding